Amendments to the Specification

Please replace paragraph [0020] with the following amended paragraph:

[0020] Another known approach employs a hosted architecture. A virtual machine application uses a VM driver to load a virtual machine monitor at a privileged level. Typical of this approach are the disclosures of U.S. Patent Nos. 6,075,938 and 6,496,847, which are incorporated herein by reference. The virtual machine monitor then uses the I/O services of a host operating system to accommodate user-level VM applications. Current examples of this approach include the VMware Workstation™, the VMware GSX Server™, both available from VMware, Inc., 3145 Porter Drive, Palo Alto, CA 94304, and the Connectix Virtual PC™, available from Microsoft Corporation, One Microsoft Way, Redmond, WA 98052-6399. Another example is the open source Plex86 Virtual Machine, available via the Internet ~~at the URL http://plex86.sourceforge.net/~~. The hosted architecture is attractive due to its simplicity. However, it incurs a performance penalty because the virtual machine monitor must itself run as a scheduled application under the host operating system, and could even be swapped out. Furthermore, it requires emulators to be written and maintained for diverse I/O devices that are invoked by the virtual machine monitor.

Please replace paragraph [0023] with the following amended paragraph:

[0023]   An unsuccessful attempt to implement a VM
computing paradigm on cluster-based systems is disclosed in the
document *The Memory and Communication Subsystem of Virtual
Machines for Cluster Computing*, Shiliang Hu and Xidong Wang,
Jan. 2002 (Hu *et al.*), published on the Internet ~~at the URL~~
~~http://www.cs.wisc.edu/~wxd/report/ece902.pdf~~. In this proposed
arrangement, multiple SMP clusters of NUMA-like processors are
monitored by virtual machine monitors.   A cluster
interconnect deals with message passing among the clusters. The
system consists of multiple virtual machines that operate under a
single operating system, and support parallel programming models.
While a virtual computer built according to this paradigm would
initially appear to be highly scalable, preliminary simulations
of the communication and memory subsystems were discouraging. A
further difficulty is posed by limitations of current operating
systems, which are generally unaware of the locality of NUMA-type
memory. According to Hu *et al.*, the proposed paradigm could not
be reduced to practice until substantial technological changes
occur in the industry. Thus Hu *et al.* appears to have encountered
a well-known difficulty: cluster machines generally, and NUMA
machines in particular, can be scaled up successfully only if
some way is found to ensure a high computation to communication
ratio in regard to both data distribution and explicit
communication among the clusters and processors.